Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Meeting of April 5th, 1888.

The President, Dr. A. JACOBI, in the Chair.

A CONTRIBUTION TO THE DIAGNOSIS AND SURGERY OF CEREBRAL TUMORS

was presented by Dr. E. C. Seguin and Dr. R. F. Weir, in the first part of which they related a case. The patient was a German, a resident of Bridgeport, under the care of his family physician, Dr. Godfrey, who first brought him to Dr. Seguin's on August 12th, 1887. In Dr. Seguin's absence an examination was made by Dr. Booth. The patient was a strong, healthy-looking man, with no history of syphilis, and no history of epilepsy in childhood. The family history was supposed to be good, but it had afterward been learned that the mother had died of cancer, probably scirrhus, of the liver. The patient had been healthy until 1882, when he had malarial fever. During this illness he had a good deal of pain in the head, and one day, when feeling strangely, he got up to go to the window, when his wife observed spasm of the right cheek and neck. Consciousness was not lost. One or two similar attacks occurred before 1885. These spasms in the face and neck on the right side were the only symptoms of cerebral disease for three years. In 1885 the symptoms became more marked. One day during that year he fell unconscious and bit his tongue. He had similar attacks at long intervals afterward. These epileptic attacks were preceded by an aura, which was followed by twitching and jerking in the right hand and arm and the right side of the face, and loss

of consciousness. No exciting cause had been observed. The memory was not so good as formerly; the speech had become thick. Dr. Seguin saw the patient for the first time on August 26th; he had had no purely motor attack in the hand alone; it had always been affected after the right cheek. There was no history of injury to the head. The patient was awkward with the right hand; the arm and hand were the seat of a numb, heavy sensation. The left side and lower extremities were not affected. At this time the tongue did not deviate, but at a later examination it deviated a trifle to the right. The patieut was seen and examined on September 21st and October 19th, when his symytoms were found to be rapidly progressing, and an operation was advised. The diagnosis was that of a tumor in the left motor zone, in the facial centre. There was slight diminution of the tactile sense in the right cheek and arm. There was slight impairment of the muscular sense in the right hand. There was constant loss of saliva from the right buccal angle. The strength of the right hand and arm was about two-thirds that of the left. Subsequently tenderness developed over the motor zone of the left hemisphere. The temperature test over the scalp was negative. Whether the tumor was cortical or subcortical was not determined. Treatment by iodide of potassium had no effect. Dr. R. F. Weir performed the operation in the New York Hospital, November 17, 1887. The head was shaved the previous day, and great pains were taken to make the operation perfectly antiseptic. The spray was not used. A minute perforation was made through the scalp and the point marked with a lead-pencil which was to be the centre for the trephine. Two pieces were then removed with the trephine, and the openings being joined, left one large opening two by three inches. The dura mater bulged only a little, and appeared normal. When it was cut the brain bulged somewhat into the opening, but its surface was normal. The finger recognized no tumor until firm pressure was made, when deep resistance was felt in a mass of small size under the suspected convolution. It was of the shape and of about the size of the end of the forefinger, or of an

almond. It was readily lifted out by a Volkmann's spoon, blunted for this purpose. A little portion of brain, of about the size of a pea, was removed with it. The finger passed in an inch and a half to the bottom of the wound. There was no hæmorrhage from the brain itself. A rubber drainage tube was carried to the bottom of the cavity and out through the posterior margin of the wound; the dura mater was stitched together except where the tube emerged. After the final dressing the wound was washed with corrosive-sublimate solution (1 to 5,000). The discs of bone were replaced. At the close of the operation the pulse was 125, and the general condition was good. Dr. Peabody pronounced the tumor an infiltrating sarcoma.

Commenting on the operation, Dr. WEIR said he thought there had been more hæmorrhage from the vessels of the scalp than he would allow at a future operation. The patient had gone to his home a month after the operation.

Dr. SEGUIN gave the history of the case from the time of the operation until about the 1st of April. There was almost complete hemiplegia with aphasia just after the operation, but these subsided, leaving the man in about his previous condition. He had no convulsion until the 18th of December. Driveling had ceased. After his return to Bridgeport he again contracted a form of intermittent fever, and the symptoms due to the cerebral lesion were most pronounced when he had the fever. There was jaundice with the malarial symptoms. The wife had observed no twitching in the muscles of the face since his return home after the operation. He stated that he knew the word he wished to use, but could not utter it. The right hand no longer felt numb. The muscular sense was practically perfect, and sensation seemed normal in the right hand. Dr. Seguin thought life had been prolonged by the operation. The paresis seemed to be somewhat greater, but he attributed this to the patient's general health. The sensibility of the face, hands, and fingers was improved. The aphasia was about the same as before the operation. There was no indication of increased intracranial pressure and no evidence of a relapse of the disease. The speaker was not positive

that the tumor had been entirely subcortical. It might have involved to some extent a deep gyrus located in its neighborhood. The case was particularly interesting when considered with reference to recent advances in the physiology of the brain and the application of such knowledge to surgical interference in a general way as well as with regard to tumors. The diagnosis of tumor of the brain for the guidance of the surgeon was, as a rule, reached gradually. Then the locality of the tumor would be determined by empirically acquired knowledge due to the studies of Broca and others, and the laws of cerebral action as elicited by Hitzig and others. The speaker here considered the signs of a tumor in the motor and sensory zones, the symptoms due to irritation or excitation of the part as distinguished from those due to its destruction, etc. Speaking of the significance of limited spasm or paresis, he had long looked upon the early spasm as a guide to correct localization of the disease. It was of so great importance that it should always be traced if possible. He would call it the signal symptom of cerebral tumor. The diagnosis of a tumor situated in the sensory zone for sight, he thought, could be made just as positively as if it were located in the motor centre for the hand, face or leg. It was of importance to determine not alone the region in which the tumor was located, but also, if possible, whether it was cortical or subcortical. He thought that at present we were unable to distinguish a cortical from a subcortical tumor by the symptoms. Regarding the significance of headache, his conclusion had been negative. Indeed, headache was an unreliable symptom of tumor of the brain independent of location. His conclusion with regard to the significance of scalp temperature had also been negative. The surgeon would be influenced as to whether he should or should not operate by the question of the probability of the tumor being multiple. The presence of tuberculosis or of cancer in other parts of the body would contra-indicate an operation. Combined symptoms of tumor in the motor and sensory zones, whether sensory or motor, would point to multiple tumor. Where more than one growth existed in a limited area of

the brain, it could not be determined during life; the surgeon might remove one and overlook the other.

Dr. WEIR then considered the surgery of cerebral tumors, and read a portion of his paper, giving a synopsis of the operations performed by Bennet, Godlee, Victor Horsley, and others. From the facts presented it would seem that an exploratory operation would be justified when symptoms pointed to progressive brain pressure, whether from tumor, abscess, or an intracerebral blood-clot, or to continuous irritation.

Dr. KEEN, of Philadelphia, related briefly the history of a case which he would at a future time publish in detail—that of a patient, aged twenty years, who had sustained a fall when three years of age, which had left a scar over the left motor region. It was not until some months before the speaker saw him that he had begun to have epilepsy and paralysis of the right leg, the right arm, and the face, and had aphasia. He removed a large tumor from the left motor zone, symptoms of pressure developed afterward, and he had to change the dressing and remove a large blood-clot. Hernia-cerebri then developed and gave considerable trouble, but the patient recovered. In this case the blood-vessels were very brittle, and he had had much difficulty in controlling hæmorrhage. He employed for this purpose hot water, ligatures, and pressure. He thought the entire scalp should be shaved, to reveal any possible scars to which attention had not been drawn.